T J B Collins

List of Publications by Year in descending order

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52 papers	2,473 citations	201674 27 h-index	189892 50 g-index
52 all docs	52 docs citations	52 times ranked	1175 citing authors

#	Article	IF	Citations
1	Causes of fuelâ€“ablator mix inferred from modeling of monochromatic time-gated radiography of OMEGA cryogenic implosions. Physics of Plasmas, 2022, 29, .	1.9	8
2	Direct-drive laser fusion: status, plans and future. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200011.	3.4	20
3	Central Density and Low-Mode Perturbation Control of Inertial Confinement Fusion Dynamic-Shell Targets. Frontiers in Physics, 2021, 9, .	2.1	3
4	Self-radiography of imploded shells on OMEGA based on additive-free multi-monochromatic continuum spectral analysis. Physics of Plasmas, 2020, 27, .	1.9	1
5	Tripled yield in direct-drive laser fusion through statistical modelling. Nature, 2019, 565, 581-586.	27.8	103
6	Determining acceptable limits of fast-electron preheat in direct-drive-ignitionâ€“scale target designs. Physics of Plasmas, 2019, 26, 062705.	1.9	13
7	First Observation of Cross-Beam Energy Transfer Mitigation for Direct-Drive Inertial Confinement Fusion Implosions Using Wavelength Detuning at the National Ignition Facility. Physical Review Letters, 2018, 120, 085001.	7.8	65
8	The National Direct-Drive Program: OMEGA to the National Ignition Facility. Fusion Science and Technology, 2018, 73, 89-97.	1.1	12
9	Mitigation of cross-beam energy transfer in ignition-scale polar-direct-drive target designs for the National Ignition Facility. Physics of Plasmas, 2018, 25, 072706.	1.9	11
10	Wavelength-detuning cross-beam energy transfer mitigation scheme for direct drive: Modeling and evidence from National Ignition Facility implosions. Physics of Plasmas, 2018, 25, 056314.	1.9	40
11	Design options for polar-direct-drive targets from alpha heating to ignition. Journal of Physics: Conference Series, 2016, 717, 012012.	0.4	0
12	Polar-direct-drive experiments at the National Ignition Facility. Journal of Physics: Conference Series, 2016, 717, 012009.	0.4	1
13	Direct drive: Simulations and results from the National Ignition Facility. Physics of Plasmas, 2016, 23, 056305.	1.9	36
14	Optical smoothing of laser imprinting in planar-target experiments on OMEGA EP using multi-FM 1-D smoothing by spectral dispersion. Physics of Plasmas, 2016, 23, .	1.9	9
15	Demonstration of Fuel Hot-Spot Pressure in Excess of 50ÂGbar for Direct-Drive, Layered Deuterium-Tritium Implosions on OMEGA. Physical Review Letters, 2016, 117, 025001.	7.8	72
16	Direct-drive inertial confinement fusion: A review. Physics of Plasmas, 2015, 22, .	1.9	521
17		1.9	52
18	The effect of laser spot shapes on polar-direct-drive implosions on the National Ignition Facility. Physics of Plasmas, 2015, 22, 032701.	1.9	6

#	Article	IF	Citations
19	Direct-driveâ€“ignition designs with mid-Z ablators. Physics of Plasmas, 2015, 22, .	1.9	25
20	Theory of hydro-equivalent ignition for inertial fusion and its applications to OMEGA and the National Ignition Facility. Physics of Plasmas, 2014, 21, .	1.9	68
21	Improving the hot-spot pressure and demonstrating ignition hydrodynamic equivalence in cryogenic deuteriumâ€“tritium implosions on OMEGA. Physics of Plasmas, 2014, 21, .	1.9	139
22	A polar-drive shock-ignition design for the National Ignition Facility. Physics of Plasmas, 2013, 20, .	1.9	37
23	Improving cryogenic deuteriumâ€“tritium implosion performance on OMEGA. Physics of Plasmas, 2013, 20, .	1.9	48
24	Polar-drive implosions on OMEGA and the National Ignition Facility. Physics of Plasmas, 2013, 20, .	1.9	28
25	Study of Rayleighâ€“Taylor growth in laser irradiated planar SiO₂ targets at ignition-relevant conditions. Physics of Plasmas, 2013, 20, 072707.	1.9	6
26	OMEGA polar-drive target designs. Physics of Plasmas, 2012, 19, .	1.9	25
27	A polar-driveâ€“ignition design for the National Ignition Facility. Physics of Plasmas, 2012, 19, .	1.9	70
28	Shock-tuned cryogenic-deuterium-tritium implosion performance on Omega. Physics of Plasmas, 2010, 17, 056312.	1.9	33
29	The effects of target mounts in direct-drive implosions on OMEGA. Physics of Plasmas, 2009, 16, .	1.9	45
30	Neutron yield study of direct-drive, low-adiabat cryogenic D2 implosions on OMEGA laser system. Physics of Plasmas, 2009, 16, 112706.	1.9	27
31	Performance of direct-drive cryogenic targets on OMEGA. Physics of Plasmas, 2008, 15, .	1.9	92
32	One-megajoule, wetted-foam target-design performance for the National Ignition Facility. Physics of Plasmas, 2007, 14, 056308.	1.9	18
33	Progress in hydrodynamics theory and experiments for direct-drive and fast ignition inertial confinement fusion. Plasma Physics and Controlled Fusion, 2006, 48, B153-B163.	2.1	27
34	Polar-direct-drive simulations and experiments. Physics of Plasmas, 2006, 13, 056311.	1.9	58
35	Test of Thermal Transport Models through Dynamic Overpressure Stabilization of Ablation-Front Perturbation Growth in Laser-Driven CH Foils. Physical Review Letters, 2006, 96, 115005.	7.8	32
36	Shock-timing experiments using double-pulse laser irradiation. Physics of Plasmas, 2006, 13, 056303.	1.9	31

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37	Improved target stability using picket pulses to increase and shape the ablator adiabat. Physics of Plasmas, 2005, 12, 056306.	1.9	29
38	Theory of laser-induced adiabat shaping in inertial fusion implosions: The relaxation method. Physics of Plasmas, 2005, 12, 042703.	1.9	48
39	Two-dimensional simulations of plastic-shell, direct-drive implosions on OMEGA. Physics of Plasmas, 2005, 12, 032702.	1.9	126
40	Multidimensional analysis of direct-drive, plastic-shell implosions on OMEGA. Physics of Plasmas, 2005, 12, 056307.	1.9	95
41	Shock propagation in deuterium-tritium-saturated foam. Physics of Plasmas, 2005, 12, 062705.	1.9	25
42	Properties of fluid deuterium under double-shock compression to several Mbar. Physics of Plasmas, 2004, 11, L49-L52.	1.9	58
43	Polar direct drive on the National Ignition Facility. Physics of Plasmas, 2004, 11, 2763-2770.	1.9	139
44	Reduction of the ablative Rayleighâ€“Taylor growth rate with Gaussian picket pulses. Physics of Plasmas, 2004, 11, 1569-1576.	1.9	17
45	Observations of modulated shock waves in solid targets driven by spatially modulated laser beams. Journal of Applied Physics, 2002, 92, 1212-1215.	2.5	5
46	Imprint reduction using an intensity spike in OMEGA cryogenic targets. Physics of Plasmas, 2002, 9, 275-281.	1.9	23
47	Oscillations of Accretion Disks and Boundary Layers in Cataclysmic Variables. II. A Local, Linear Stability Analysis of Accretion Disk Boundary Layers. Astrophysical Journal, 2000, 534, 944-966.	4.5	9
48	Oscillations of Accretion Disks and Boundary Layers in Cataclysmic Variables. I. Unperturbed, Steadyâ€Flow Models. Astrophysical Journal, 2000, 534, 934-943.	4.5	8
49	Single-mode, Rayleigh-Taylor growth-rate measurements on the OMEGA laser system. Physics of Plasmas, 2000, 7, 338-345.	1.9	83
50	Accretion Disk and Boundary Layer Models Incorporating Opal Opacities. Astrophysical Journal, 1998, 502, 730-736.	4.5	10
51	A Model for Quasi-periodic Oscillations in Cataclysmic VariablesBased on Boundary Layer Oscillations. Astrophysical Journal, 1998, 508, L159-L161.	4.5	10
52	The Effects of Radial Viscous Forces on the Structure of Accretion Disk Boundary Layers. Astrophysical Journal, 1997, 478, 417-422.	4.5	6